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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/685,210

10/14/2003

Lawrence C. Lei

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4105

7590

12/23/2004

## PATENT COUNSEL

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EXAMINER

PATIDAR, JAY M

ART UNIT

PAPER NUMBER

2862

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/685,210

Applicant(s)

LEI ET AL.

Examiner

Jay M. Patidar

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/15/2004 ✓

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. Claims 15,31,34,38,43 are objected to because of the following informalities:

In claim 15,31,38,43, the phrase "displaying data on the thickness.." is confusing; perhaps applicant intends to say "displaying data **about** (or **of**) the thickness..";

In claim 34, line 4, "text" should be ---test---.

Appropriate correction is required.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2,6-12,15-19,23-28,31-35,38-41,43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 42 27 734 in view of Shimazaki (5,917,601).

As to claims 1,6,7,11,15,18,23,24,28,31,34-35,38-41,43-44, '734 discloses an apparatus for measuring thickness of an object comprising an eddy current sensor having first and second sensor heads 15,16 (fig. 3a) positioned to have a predetermined gap therebetween for passage by at least a portion of the object through said gap; said heads making measurements at one or more sampling locations on the object when at said gap; a mechanism for moving the test object through the gap which said measurement are made; and an evaluation circuit for determining the thickness of the object (Figs. 1,2,3a,5a, page 3, line 57-page 3, line 20). '734 does not explicitly disclose a position sensing means for determining the position of the object. Shimazaki is cited to show this feature. Shimazaki teaches to use optical sensing means 6,7 to determine the position of the object (e.g. fig. 4). Consequently, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of '734 to have included the position measuring means as taught by Shimazaki to accurately determine the position of the object.

As to claims 2,12,19, 32-33, '734 discloses the means for moving the object between the eddy current heads gap. The use of a robotic end effector is known in the semiconductor wafer art and is considered an obvious variation (e.g. note 6,578,893).

As to claims 8-10,16-17,25-27,45, the position sensor in Shimazaki detects an edge of the wafer and is an optical sensor (Note abstract, line 2).

Claims 3-5,13-14,20-22,29-30,36-37,42 are rejected under 35 U.S.C. 103(a) as being unpatentable over combination of '734-Shimazaki and in view of Hassan (5,886,521).

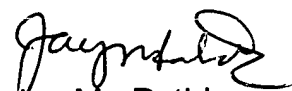
As to claims 3-5,13-14,20-22,29-30,36-37,42, the combination of '734 and Shimazaki discloses an apparatus for measuring the thickness of the object as explained above except for a displacement sensor. Hassan discloses a displacement sensor to detect the displacement of the test object with respect to the sensing head (Note figs. 1-2). '734 teaches in fig. 2 that the position of the object with respect to heads is important for measuring the thickness. One ordinary skilled in the art would modify the device of '734 to have included a displacement sensor as taught by Hassan to accurately determine the thickness of the object. The displacement sensor in Hassan is a laser distance sensor (Figs. 1-2).

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay M. Patidar whose telephone number is 571-272-2265. The examiner can normally be reached on M-Thur 7:00-5:30.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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December 20, 2004